

선천성 승모판 협착증을 동반한 성인 대동맥축착의 스텐트 삽입술 1례

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A Case Report : Implantation of Balloon-Expandable Stent for Coarctation of the Aorta, Associated with Congenital Mitral Stenosis

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ABSTRACT

Coarctation of aorta is a rare cause of secondary hypertension, and premature death will occur if no appropriate treatment is given. The only effective treatment was surgery before 1980, but restenosis was frequent. Several works on percutaneous transluminal angioplasty of the disease were reported. In patients with previously operated recoarctation, there is no doubt that balloon angioplasty is now the first choice of the therapy because of the surgical risks of reoperation. Nevertheless, there has still been some controversy regarding the application of this therapy to native coarctation, because of the potential risk of aortic disruption and the high incidence of restenosis. There have been some clinical reports of successful stent implantation for coarctation without major complications since 1991. We report on our experience with balloon-expandable stent implantation for native coarctation of the aorta in a 23-year-old man with congenital mitral stenosis. Aortogram showed a coarcted aortic segment of 3 mm in diameter and 25 mm long just distal to the left subclavian artery. The peak systolic pressure gradient across the coarctation before stent implantation was 100 mmHg. Stent implantation was performed with 14 × 40 mm balloon with Palmaz P308 stent. The peak systolic pressure gradient decreased to zero and the diameter of the coarctation of aorta increased to 14 mm after stent implantation immediately. The patient tolerated well and no significant complications were encountered during the procedure. (**Korean Circulation J 1998;28(5):819-824**)

KEY WORDS : Coarctation of aorta · Congenital mitral stenosis · Balloon-expandable stent implantation.

서 론

가

1945 Crafoord Nylin¹⁾

: 1998 3 28

: 1998 5 21

: , 120 - 752 134

1982 Singer

²⁾

³⁾

: (02) 361 - 7740, 7741 · : (02) 363 - 7690

E - mail : Cardio@yumc.yonsei.ac.kr

가 4-9).
¹⁰⁾ 1991
 O'Laughlin
¹¹⁾
¹²⁻¹⁵⁾
 1990
¹⁶⁾ 1994 1997
¹⁷⁾¹⁸⁾

가 1 -

증례

: , 23 .
 : .
 : 4 100 cc

DSA

가 :
 : 200/90 mm
 Hg, 190/90 mmHg, 120
 /70 mmHg, 120/70 mmHg, 80
 / , 20 / , 36.5 .

Grade 3

:
 12.4 g/dL, 36.8%, 5800/mm³,
 196,000/mm³ .
 Na 140 mM/L, K 3.8 mM/L, Cl 108 mM/L, tCO₂ 26
 mM/L , BUN 14.0 mg/dl, Cr
 1.1 mg/dl, total protein 7.0 g/dl, albumin 4.2 g/dl,
 AST 13 IU/L, ALT 22 IU/L, ALP 69 IU/L .
 : X rib
 notching . DSA
 3 mm 25 mm
 , (internal mammary
 artery) (intercostal artery)

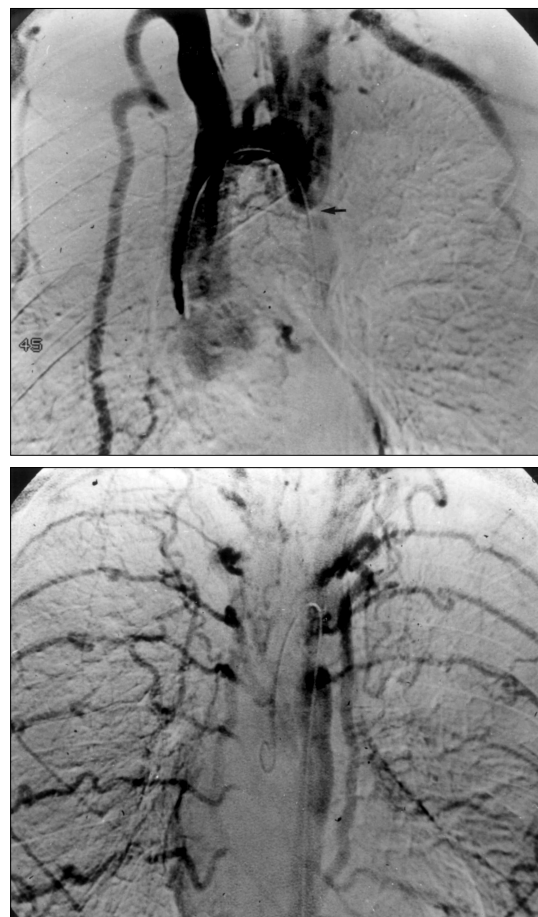


Fig. 1. DSA showed coarctation of the aorta below left subclavian artery (arrow) (A) and collateral vessels such as internal mammary artery and intercostal artery (B).



Fig. 2. Echocardiography of congenital mitral stenosis. Apical 4 chamber view (A) and parasternal short axis view (B) showed abnormal attachment of chordae (arrow) with limitation of motion of mitral valve.

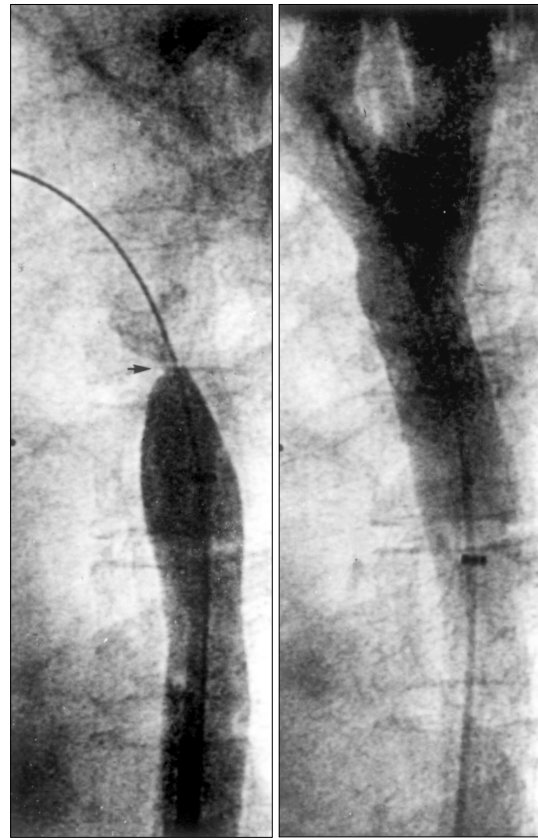


Fig. 3. Aortogram before stent implantation revealed discrete native coarctation of the aorta (arrow)(A), after stent implantation showed no residual stenosis (B).

(Fig. 1a and b).
: 1.4 cm²
commisure
(chordae)
annulus
(Fig. 2a and b).
1.3 cm subtotal lu -
minal narrowing

100 mmHg (Fig. 3a).
- :
5F Multi - purpose catheter
heparin
5000 units
9F Mullin sheath
12×40 mm
(Meditech. Ultrathin)
1
가
14×40 mm Palmaz P308 stent(Jonson
and Jonson Interventional System, Somerville,
NJ)
. Sheath 30%
8 60 가

(pred -
uctal),
(postductal)
,²³⁾ 40
(Fig. 3b).
3
mm 14 mm
, Stent
3 140/70 mmHg,
140/70 mmHg
130/70 mmHg, 130/70 mm , 3 75%
Hg , 가 , 3 , 8 10
고 찰
가
3 8 ,²⁵⁾
가 가
50%, 6 ,²⁰⁾ 15%, 1 5%
5 9%
0.7%
¹⁹⁾ 2 5 : 1
Skodiac ,²⁰⁾²¹⁾
가 (controlled injury) 가
(uncontrolled damage) 가
²²⁾ 75%
가
²³⁾ 26)
cystic medial necrosis
1
Shone
²³⁾²⁴⁾

가

가

,²⁷⁾

,¹¹⁾ 1991

O' Laughlin¹¹⁾

, Marrow²⁶⁾

가

, Suarez de Lezo¹³⁾

10

. Bulbul

14)

19.8 6

8

, ,

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, 가

13)28)

가

23

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